--WHAT IS CLAIMED IS:--.

Claim 3, line 1, delete "for upgrading a titaniferous mineral";

line 2, change "2" to --18--; change "compound of sodium is" to --additive comprises--.

Claim 4, line 1, delete "for upgrading a titaniferous mineral";

line 2, change "2" to --18--; change "compound of sodium is" to --additive comprises--.

Claim 5, line 1, delete "for upgrading a titaniferous mineral";

line 2, change "2" to --18--; change "compounds include" to --additive comprises--.

Claim 6, line 1, delete "for upgrading a titaniferous mineral";

line 2, change "2" to --18--; change "compounds comprise" to --additive comprises--.

7.(Amended) A process according to Claim 6, wherein the titaniferous material <u>contains an iron oxide impurity and</u> is heated to a maximum temperature of 1000°C for a period which avoids substantial reduction to metal of [contained] <u>the</u> iron [oxides] <u>oxide impurity</u>.

Claim 10, line 2, after "with" insert --1-20 wt.%--;

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lines 3-4, delete "having...hydrochloric acid--.

11.(Amended) A process according to claim [1] 17, wherein the [compounds include] additive includes compounds which extend the effect of other compounds in the additive.

Claim 12, line 1, after "11" insert --,--.

Claim 13, line 1, change "1" to --17,--;

line 2, change "compounds are" to --additive is--.

Claim 14, line 1, change "1" to --17,--.

Please cancel Claims 1, 2 and 16 without prejudice or disclaimer of the subject matter thereof, and insert the following new claims:

--17. A process for upgrading of a titaniferous material by removal of impurities, comprising the steps of:

i) heating a titaniferous material containing impurities under reducing conditions at a temperature of about 1000°C to less than 1300°C in the presence of an additive which promotes formation of a liquid oxide phase containing said impurities at said temperature, to form a solid titaniferous phase and a liquid oxide phase containing said impurities;

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ii) cooling the heated solid titaniferous material and liquid oxide phase to form a solidified material comprising a titaniferous phase and an impurity containing phase that is leachable in an acid or alkaline leachant; and

iii) leaching the solidified material with an acid leachant or an alkaline leachant to leach at least a portion of said impurities.

18. A process according to claim 17, wherein the additive comprises at least one compound selected from the group consisting of compounds of sodium, potassium, lithium, phosphorus, silicon and boron.

19. A process according to claim 17, wherein the solidified material is leached with an alkaline leachant.

20. A process according to claim 19, further comprising leaching the alkaline leached solidified material with an acid leachant.

21. A process according to claim 17, wherein the alkaline leachant is caustic soda.

22. A process according to claim 17, wherein the titaniferous material is heated to a temperature of at least 1000°C.

23. A process according to claim 17, wherein the titaniferous material is heated under reducing conditions.

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24. A process according to claim 23, wherein the titaniferous material is heated in the presence of a solid carbonaceous material.

25. A process upgrading of a titaniferous material by removal of impurities, comprising the steps of:

i) heating a titaniferous material containing impurities under reducing conditions at a temperature of less than 1300°C in the presence of an amount of an additive which promotes formation of a liquid oxide phase containing said impurities at said temperature, to produce thereby a solid titaniferous phase and a liquid oxide phase containing said impurities;

ii) cooling the heated solid titaniferous material and liquid oxide phase to form a solidified material comprising a titaniferous phase and an impurity containing phase that is leachable in an acid or alkaline leachant; and

iii) leaching the solidified material with an acid leachant or an alkaline leachant to leach at least a portion of said impurities.

26. A process according to Claim 25, wherein additive is present in an amount of about 1% by weight of the titaniferous material.

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